

Paediatrics

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PICU-acquired complications: the new marker of the quality of care, *K. Choong*

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PAEDIATRICS

It is never easy when children are in the hospital. And it is even more stressful when they're in the Paediatric Intensive Care Unit (PICU). When a child is admitted to the PICU, it means that they require the highest level of medical care. Children in the PICU present with different symptoms and conditions - from serious infections to heart conditions; from asthma to diabetes; from a traumatic injury to a drowning accident. In other words, children in the PICU are acutely ill and require highly-skilled, minute-to-minute care, and attention.

Our cover story Paediatrics discusses the treatment and management of the critically ill child. Managing a child in the PICU requires specific and consistent care and continuous monitoring. Many times, there is a need to use treatment modalities that are not available in other parts of the hospital. And these modalities often involve the use of ventilators and certain medicines (sedatives and opioids) that can only be given while keeping the child under close supervision.

Our contributors talk about these challenges and discuss clinical practices that can improve care. Nilesh Mehta talks about quality improvement tools that can help transform the paediatric intensive care unit into a highly reliable and safe environment that nurtures continuous learning and delivery of high-quality care.

Sapna Kudchadkar presents an overview of the 'PICU Up!' mobility programme at Johns Hopkins University School of Medicine, which integrates sleep promotion, delirium prevention, and sedation optimisation to increase mobilisation in critically ill children.

Karen Choong discusses PICU-acquired complications and the fact that they continue to be under-recognised amongst PICU clinicians. She highlights the importance of early recognition and the introduction of ICU based rehabilitation strategies to improve patient outcomes.

Elisabeth Esteban, Iolinda Jordan, and Francisco José Cambra discuss the challenges and opportunities to improve care and practice in the PICU and talk about the family-centred model and how it is essential to provide the best care for children.

Marcelo Malakooti talks about the use of virtual reality and how critically ill children at all developmental levels can benefit from interactive experiences that provide positive stimulation that otherwise are absent from the ICU environment.

In our Informatics and Technology section, Dr. Theodoros Kyprianou outlines seven steps to design,

procure, implement and maintain a Clinical Information System for the intensive care unit and how such a system needs to be adapted and customised to fit local healthcare professionals' and patients' needs.

In our Matrix section, Vittoria Comellini, Stefano Nava, and Antonio Artigas talk about respiratory physiotherapy in critically ill patients and how it represents a fundamental part of the standard practice in ICU. They provide an overview of the physiotherapeutic tools and strategies that can be applied to critically ill patients. Tim Frenzel, Lisanne Roesthuis and Johannes G van der Hoeven talk about a structural approach for diagnosing weaning failure and highlight the importance of prescribing an individualised treatment plan. Gennaro Martucci, Karin Amrein, and Julia Ney provide a review on the role of vitamin D in critically ill patients and the potential benefit of vitamin D supplementation.

In our Management section, Julie Darbyshire presents practical measures and interventions to reduce noise levels in the ICU and to improve the patient experience. She highlights the importance of a wider understanding of the types of noise that can be most disturbing and the consequences of constant disturbance on patients. Mark P. Abrams highlights the importance of Person in Personalised Medicine and why it is crucial to maintain a focus on the patient-doctor relationship in order to more fully optimise patient care.

Our interview section features Rolf Rossaint, Professor of Anaesthesiology, RWTH University Aachen, Germany. Prof. Rossaint has published several high-quality studies dealing with the treatment of severe acute respiratory distress syndrome (ARDS) and has also been actively involved in research on the pathophysiology of trauma associated coagulopathy and possible treatments. He discusses these new guidelines with ICU Management & Practice.

Managing the critically ill child is no small feat, especially when we are in the midst of a paradigm shift from a culture of sedation and immobility to a culture of mobilisation and early recovery. PICU teams need to work together to implement this change and to provide high-quality care using advanced treatment strategies that are safe and effective for children. ■

As always, if you would like to get in touch, please email JLvincent@icu-management.org.

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